

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Trutna, Jr. et al. )  
Serial No. 10/733,675 ) Group Art Unit: 2611  
Filed: December 11, 2003 ) Examiner: AGHDAM, Freshteh  
For: COMMUNICATION SYSTEM )  
USING WAVELENGTH )  
SPREAD-SPECTRUM CODING )

**REQUEST FOR PRE-APPEAL BRIEF CONFERENCE**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

November 20, 2007  
*Filed Electronically*

Sir:

Responsive to the final Office Action mailed August 21, 2007, the Applicants respectfully request panel review pursuant to the Pre-Appeal Brief Conference Pilot Program. 1296 Off. Gaz. Pat. Off. 67 (12 July 2005, extended 10 January 2006). A Notice of Appeal is filed herewith. This Request is filed within three months of the mailing date of the Office Action and concurrently with a Notice of Appeal. Therefore, no extension of time is believed to be required. However, if any additional fee is due, please debit Deposit Account 50-3718.

The Applicants believe that pre-appeal review is warranted because the rejections of record clearly are improper and factually deficient.

***Status of Claims***

Claims 1-25 remain pending in the application. Claims 1-25 stand rejected. Claims 1 and 11 are the independent claims in the application.

***The rejection of Claims 1-2 under 35 U.S.C. § 103(a) as being unpatentable over Sudo (U.S. Patent No. 6,839,335) in view of Liu et al. (U.S. Patent Publication No. 2001/0007574) and Hoang et al. (U.S. Patent Publication No. 2004/0246973) and the rejection of Claims 11-12 under 35 U.S.C. § 103(a) as being unpatentable over Sudo (U.S. Patent No. 6,839,335) in view of Liu et al. (U.S. Patent Publication No. 2001/0007574) are improper***

The Examiner has combined Sudo (Fig. 1 and col. 1, lines 28-34 and 53-64) with Liu et al. (paragraph 0054) and Hoang et al. (paragraph 0011) to reject the Applicants' independent claim 1, and combined Sudo (Fig. 1 and col. 1, lines 28-34 and 53-64) with Liu et al. (paragraph 0054) to reject the Applicants' independent claim 11. Each of the Applicants' claims 1 and 11 recites, among other features, transmitting information signals via multiple transmission channels using wavelength division multiplexing (WDM) by (1) spread-spectrum encoding each of a plurality of information signals with a respective, mutually different spreading code to generate a coded signal corresponding to each bit of the spreading code, (2) allocating the coded signals corresponding to the same bit of the spreading codes to a respective one of the transmission channels, (3) in each of the transmission channels, analog summing the coded signals to generate a modulation signal, and (4) in each of the transmission channels, generating a transmission signal in response to the modulation signal. The Applicants' claim 1 further recites that an optical transmission signal is generated in response to the modulation signal. The Applicants respectfully submit that none of the Examiner's combinations teach or suggest the combination of the elements (1), (2), (3) and (4) referred to above, which are recited in each of independent claims 1 and 11. For at least this reason, the Applicants respectfully submit that the rejection is improper and respectfully request that it be withdrawn.

The primary reference cited by the Examiner, Sudo, discloses a wireless radio communication system with multiple antennas to mitigate multipath interference with multiple signals. More specifically, Sudo's system is a combination OFDM (orthogonal frequency-division multiplexing) and CDMA (code division multiple access) radio

communication apparatus and method directed to decreasing amplitude differences between subcarrier signals to maintain orthogonality between spreading codes. OFDM systems involve electrical (not optical) communication systems and the use of frequency division multiplexing (not wavelength division multiplexing). CDMA systems also involve electrical (not optical) communication.

The Applicants' apparatuses and methods are directed to wavelength spread-spectrum coding methods and apparatus for use in wavelength division multiplexing (WDM) communication systems. Wavelength division multiplexing is used in optical communication systems to transmit multiple channels of information, at different wavelengths, over a single optical transmission medium, such as a single optical fiber. Unlike Sudo, the Applicants' claimed invention does not involve radio or radio communication systems.

Also, although Sudo uses spreading codes for each of a plurality of wireless radio transmission signals, Sudo does not add them using analog summers, as in the Applicants' claimed invention. Rather, Sudo interleaves the transmission signals using a serializer. That is, Sudo uses a serial-parallel converter (3) to divide and disassemble the spread signals into individual chips (bits) for each spread signal. Additionally, Sudo then frequency division multiplexes the disassembled chips using an IFFT processing section (4). The Applicants' claimed invention does not use or include any such IFFT section.

With respect to the secondary references cited by the Examiner, the Liu et al. reference, more particularly paragraph 0054 of the Liu et al. reference, is cited by the Examiner as teaching the Applicants' analog summers. However, paragraph 0054 of the Liu et al. reference merely describes how much data an ASDL (asymmetric digital subscriber line) modem can transmit. More specifically, paragraph 0054 of the Liu et al. reference refers generally to the number of bits that can be processed over a given time frame as the summation of the bits for each subchannel. Therefore, the cited portion of the Liu et al. reference does not even refer to an adder, but rather to a definition for transmission rate (of as ASDL modem).

The Hoang et al. reference, more particularly paragraph 0011 of the Hoang et al. reference, is cited by the Examiner for its disclosure of wavelength division multiplexing

as a form of frequency division multiplexing. Paragraph 0011 of Hoang et al. merely mentions WDM transmission in general, which is known. However, as evident from the discussion hereinabove with respect to Sudo and Liu et al., a paragraph that mentions WDM transmission combined with Sudo and Liu et al. does not disclose or suggest the Applicants' claimed invention.

For at least the reasons discussed hereinabove, the combination of the cited language in Sudo with the cited language in Liu et al. and Hoang et al. does not disclose or suggest the Applicants' claimed invention as recited in independent claims 1 and 11. Therefore, the Applicants respectfully submit that the rejection of claim 1 under 35 U.S.C. §103(a) over Sudo in view of Liu et al. and Hoang et al. and the rejection of claim 11 under 35 U.S.C. §103(a) over Sudo in view of Liu et al. are improper.

For at least the reason that all of the dependent claims depend directly or indirectly from either independent claim 1 or independent claim 11, and therefore incorporate their respective elements, the Applicants respectfully submit that all of the dependent claims also are patentable over the art of record and respectfully request that the rejections of those claims also be withdrawn.

CONCLUSION

In view of the foregoing, it is clear that the grounds of rejection are deficient and improper. Accordingly, the Applicants earnestly solicit a panel decision that the rejection be withdrawn.

Respectfully submitted,  
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